College Student Perception of the Dictionary of Occupational Title Scores for Their Chosen Occupations

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Abstract

This paper will discuss the results of a study in which junior-level college students were asked to select the Dictionary of Occupational Titles worker function numbers (Data, People, Thing), D.O.T. general education development numbers (reasoning development, mathematical development, and language development), and the D.O.T. specific vocational preparation numbers for the profession they hope to occupy after graduation. The student-selected numbers were then compared with the actual numbers compiled by the U.S. Department of Labor; the actual numbers were obtained by conducting thousands of interviews with practitioners in those professions. The results find that students often overestimate the work function requirements for their chosen professions.

Introduction

Many articles, books, and Internet sites provide information to students on how to obtain employment. Some of these sources focus on the beginning stages of the process, such as matching personality traits and interest with compatible career choices. Other books assist students after they have chosen a possible occupation by providing guidance on preparing resumes or how to succeed during an interview.

The United States government publishes some of the best known and most useful career preparation guides. Among those titles published by the United States government are the *Occupational Outlook Handbook* and *Dictionary of Occupational Titles*, published by the U.S. Department of Labor.

Methodology

A total of 86 students in three Business Communication classes at a Texas state university completed an assignment in which they provided numeric scores that represented their impressions of the skill requirements needed to perform the jobs for which they were then preparing. The responses of 68 students were able to be used in the study findings.

The student responses were compared to numbers for each of those occupations printed in the most recent edition of the *Dictionary of Occupation Titles*.

Demographics

The students in the study possessed these demographic characteristics:

- Most respondents were female: 69.6 percent.
- The average age of the respondents was 23 years; 41.5 percent of the respondents were between 19-20 years of age; 46.1 percent were between 21-25; and 12.3 percent were older than 26 years of age.
- Most respondents were classified as juniors. 80.3 percent of the respondents held junior academic classification; 19.6 percent were seniors.
- Most respondents were accounting or marketing majors. 28.7 percent of the respondents were accounting majors; 10.6 percent were economics and finance majors; 13.6 percent were general business or business administration majors; 13.6 percent were management majors; 27.2 percent were marketing majors; 6 percent were MIS majors; and 13.6 percent were other majors or did not provide their major.

Information About the *Dictionary of Occupational Titles*

D.O.T creation. The *Dictionary of Occupational Titles* was first printed in 1939 in order to standardize occupational definitions. The idea was to "provide a uniform occupational language" to be used in "local job service offices" (U.S. Department of Labor, 1991). The first edition contained 17,500 occupational definitions (U.S. Department of Labor, 1991).

The *Dictionary of Occupational Titles* has been updated several times. The second edition was published in 1949, the third edition in 1965, and the fourth edition in 1977. The fourth edition has been updated twice with revised supplements (U.S. Department of Labor, 1991). The fourth edition contains approximately 2,100 new occupational definition compiled after conducting "approximately 75,000 on-site job analysis studies" (U.S. Department of Labor, 1991).

D.O.T. *Worker Functions*. An important component of the *Dictionary of Occupational Titles* is the D.O.T. number. The D.O.T. number contains nine digits. The first three digits represent an "occupational group." The middle three digits represent "worker function." The three worker function numbers display the level of the typical tasks or skills performed of all workers: working with data (fourth digit), working with people (fifth digit), and working with things (sixth digit) (U.S. Department of Labor, 1991).

The highest score possible for all three worker functions is 0, while the lowest possible scores for the other worker functions vary from 6 to 8 (6 for "Data," 8 for "People," and 7 for "Things") (U.S. Department of Labor, 1991).

Here is a description of the traits associated with the various worker function numbers:

Number	Data	People	Things
0	Synthesizing	Mentoring	Setting up
1	Coordinating	Negotiating	Precision Working
2	Analyzing	Instructing	Operating-Controlling
3	Compiling	Supervising	Driving-Operating
4	Computing	Diverting	Manipulating
5	Copying	Persuading	Tending
6	Comparing	Speaking-Signaling	Feeding-Offbearing
7		Serving	Handling
8		Taking Instructions-Helping	

D.O.T. General Education Development (GED). The *Dictionary of Occupational Titles* provides information about the skill levels required in three important areas of general education development: reasoning development, mathematical development, and language development. The scale for each of these items range from 6 (on the high extreme) to 1 (on the low extreme) (U.S. Department of Labor, 1991).

D.O.T. Specific Vocational Preparation. The *Dictionary of Occupational Titles* provides information about the length of time needed to become competent to perform given occupations (U.S. Department of Labor, 1991) . The scale for vocational preparation range from 1 (short demonstration only) to 9 (over 10 years), as shown below.

1	Short demonstration only
2	Anything beyond short demonstration up to and including 1 month
3	Over 1 month up to and including 3 months
4	Over 3 months up to and including 6 months
5	Over 6 months up to and including 1 year
6	Over 1 year up to and including 2 years
7	Over 2 years up to and including 4 years
8	Over 4 years up to and including 10 years

9 Over 10 years

Results

The results will be presented in three areas: (a) data, people, and things; (b) general education development; and (c) specific vocational preparation.

Data, People, and Things Results

The students were quite accurate in predicting the "data" level required for their chosen occupations. The average number given by the students was 1.2. The actual D.O.T. number provided was 1.3. The student estimate was only off by .1. These demographic groups came closest in their reported "data" estimates: males, ages 21-25, junior standing, and marketing majors.

The students greatly overestimated the level of "people" skills required for their chosen professions. The average number given by the students was 1.6, a fairly high number. The actual D.O.T. number provided was 5.1. The students overestimated the number by 3.5. These demographic groups came closest in their reported "people" estimates: males, ages 21-25, senior standing, and marketing and general business/business administration majors.

The students also overestimated the level of "things" skills required for their chosen professions. The average number given by the students was 2.1. The actual D.O.T. number provided was 5.5. The students overestimated the number by 3.4. These demographic groups came closest in their reported "things" estimates: females, ages 26 and over, senior standing, and accounting majors.

General Education Development

The students slightly overestimated the level of "reasoning development" skills required for their chosen professions. The average number given by the students was 5.3. The actual D.O.T. number provided was 4.8. The students overestimated the number by .5. These demographic groups came closest in their reported "reasoning" estimates: females, ages 26 and over, junior standing, and finance majors.

The students also slightly overestimated the level of "mathematical development" skills required for their chosen professions. The average number given by the students was 4.5. The actual D.O.T. number provided was 4.2. The students overestimated the number by .3. These demographic groups came closest in their reported "mathematical" estimates: females, ages 21-25, junior standing, and accounting majors.

The students also slightly overestimated the level of "language development" skills required for their chosen professions. The average number given by the students was 4.9. The actual D.O.T. number provided was 4.6. The students overestimated the number by .3. These demographic groups came closest in their reported "language" estimates: females, ages 19-20, junior standing, and accounting majors.

Specific Vocational Preparation Results

The students slightly underestimated the level of preparation needed to secure their vocational positions. The average number given by the students was 6.6. The actual D.O.T. number provided was 7.2. The students underestimated the number by .6. These demographic groups came closest in their reported "SVP" estimates: males, ages 19-20, senior standing, and finance majors.

References

U.S. Department of Labor (1991). *Dictionary of Occupational Titles*, Vol. 1, Fourth Edition, Revised 1991. Washington, DC: U.S. Government Printing Office.

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